March 26, 2019

OEM message on Instrumentation and Sampling

ASPECT:

The U.S. EPA Airborne Spectral Photometric Environmental Collection Technology (ASPECT) has flown over 13 flights from March 17, 2019 through March 26, 2019, near the ITC site. The results from ASPECT were compared to the ASPECT list of the Texas Commission on Environmental Quality (TCEQ) short-term Air Monitoring Comparison Values (AMCVs). On March 20, 2019, ASPECT found a single reading of isoprene which exceeded the short-term AMCV. On March 22, 2019, ASPECT found exceedances of the short-term AMCVs for butadiene and isoprene. The ASPECT list of short-term AMCVs were not exceeded during most of the ASPECT flights.

TAGA:

The Trace Atmospheric Gas Analyzer (TAGA) has sampled air from March 21, 2019 through March 26, 2019, and has analyzed the air samples for benzene, toluene and xylene. The TAGA air sampling results were compared to the Texas Commission on Environmental Quality (TCEQ) short-term Air Monitoring Comparison Values (AMCVs) and found no exceedances of the short-term AMCVs for toluene and xylene. The TAGA air sampling results has found exceedances of the short-term AMCV for benzene (0.18 ppm). These exceedances of the short-term AMCV for benzene primarily have occurred near the ITC site.

Hand-Held Real-Time Air Monitoring:

EPA is monitoring near the ITC facility and in the community using MultiRAE portable multi-gas monitors. These monitors provided real-time concentrations of selected gases including hydrogen sulfide, carbon monoxide, and oxygen. Additionally, the tool measures total volatile organic compounds (VOCs) such as naptha, benzene, xylene, and toluene. The MultiRAE also captures the instantaneous lower explosive limit. The MultiRAE is an initial screening tool to help the field responders make informed decisions based on actual measurements. On occasion the MultiRAE reading near the ITC site have exceeded the short-term AMCV for benzene.

Surface Water Sampling:

EPA is conducting surface water sampling during the ITC response. The surface water samples are collected from multiple locations in Tucker Bayou, Buffalo Bayou and the San Jacinto River. The surface water samples are analyzed for per- and polyfluoroakyl substances (PFAS), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), chemical oxygen demand (COD), and Oil & Grease. The results from surface water sampling are compared to the Texas Commission on Environmental Quality (TCEQ) surface water protective values. To date we have found PFAS in every surface water sample analyzed for PFAS. The surface water samples taken from the confluence of Tucker Bayou and Buffalo Bayou have the highest concentrations of perfluorooctane sulfonate (PFOS) at approximately 3800 ng/L. Perfluorooctanoic acid (PFOA) concentrations found at the confluence are approximately 120 ng/L. These values are well above EPA's recommended drinking

water advisory level of 70 ng/L for PFOS and PFOA. However, the advisory level is not applicable in surface waters which do not have drinking water use. In addition, the surface water samples taken from the confluence of Tucker Bayou and Buffalo Bay have exceeded the protective value for benzene.